WHAT IS CLAIMED:

1. A multi-layer capacitor, comprising:

a substrate;

a first electrode layer generally covering said substrate;

a first insulating layer generally covering said first electrode layer, said first insulating layer defining a first plurality of through-holes there through, said first plurality of through-holes each respectively having a first diameter thereof;

a resistive layer generally covering said first insulating layer, said resistive layer defining a second plurality of through-holes there through, said second plurality of through-holes each respectively having a second diameter thereof greater than or equal to said first diameter;

a second electrode layer generally covering said resistive layer, said second electrode layer defining a third plurality of through-holes there through, said third plurality of through-holes each respectively having a third diameter thereof greater than or equal to said second diameter, said first, second and third pluralities of through-holes being respectively concentrically juxtaposed and forming respective plural through-hole triplets; and

a first plurality of electrically conductive vias passing through selected of said through-hole triplets, each of said first plurality of electrically conductive vias respectively being connected to said first electrode layer and provided in a non-contacting relationship with said second electrode layer.

2. A multi-layer capacitor as in claim 1, further comprising:

a second insulating layer generally covering said second electrode layer, said second insulating layer defining a fourth plurality of through-holes there through, said fourth plurality of through-holes being respectively offset laterally from said respective plural through-hole triplets; and

a second plurality of electrically conductive vias passing through selected of said fourth plurality of through-holes, each of said second plurality of electrically conductive vias respectively being connected to said second electrode layer.

3. A multi-layer capacitor as in claim 1, wherein:

said substrate has an outer perimeter; and

said first and second electrode layers each comprise a respective substantially continuous portion and a plurality of tab portions extending from said respective continuous portions to said outer perimeter of said substrate.

4. A multi-layer capacitor as in claim 3, further comprising:

a plurality of solder balls, wherein each solder ball is respectively applied to a portion of selected ones of said first and second pluralities of electrically conductive vias.

5. A multi-layer capacitor as in claim 1, wherein each of said first plurality of electrically conductive vias is characterized by respective first and second ends, and wherein a selected end of each of said first plurality of electrically conductive vias abuts said first electrode layer.

6. A method for adjusting the equivalent series resistance (ESR) of a multi-layer component, said method comprising the steps of:

producing a multilayer component including at least first and second electrode layers separated by an insulating layer;

providing a resistive layer between the insulating layer and one of the first or second electrode layers; and

adjusting the ESR of the component by varying the effective resistance of the resistive layer.

7. A method as in claim 6, wherein said adjusting step comprises:

perforating one of the first or second electrode layers with a plurality of through-holes; and

varying the effective resistance of the resistive layer by adjusting the diameter of selected of the plurality of through-holes whereby the extent of coverage of the perforated electrode layer varies the effective resistance of the resistive layer.

8. A method as in claim 6, wherein said adjusting step comprises:

varying the effective resistance of the resistive layer by adjusting the thickness of the resistive layer.

9. A method as in claim 6, wherein said adjusting step comprises:

varying the effective resistance of the resistive layer by adjusting the composition of the resistive layer.

10. A method of adjusting the resonance characteristics of a multi-layer component, said method comprising the steps of:

producing a multi-layer component having a plurality of successively stacked electrode layers;

providing separate insulating layers sandwiched between each of the electrode layers; and

varying the thickness among selected of the separate insulating layers whereby the resonance characteristics of the multi-layer component are adjusted.

11. A method of adjusting the resonance characteristics of a multi-layer component as in claim 10, wherein said step of varying comprises:

providing separate insulating layers with continuous thickness variation among layers.

12. A method of adjusting the resonance characteristics of a multi-layer component as in claim 10, wherein said step of varying comprises:

providing separate insulating layers with patterned thickness variation among layers.

13. A method of adjusting the resonance characteristics of a multi-layer component as in claim 10, wherein said step of varying comprises:

providing separate insulating layers with matched variable thickness variation among layers.

14. A multi-layer capacitor, comprising:

a substrate;

a first electrode layer generally covering said substrate;

a first insulating layer generally covering said first electrode layer and defining a first plurality of through-holes there through, said first plurality of through-holes each respectively having a first diameter thereof;

a second electrode layer generally covering said first insulating layer and defining a second plurality of through-holes there through, said second plurality of through-holes each respectively having a second diameter

thereof greater than or equal to said first diameter, said first and second pluralities of through-holes being respectively concentrically juxtaposed and forming respective plural through-hole pairs; and

a first plurality of electrically conductive vias passing through selected of said through-hole pairs, each of said first plurality of electrically conductive vias being respectively connected to said first electrode layer and provided in a non-contacting relationship with said second electrode layer;

wherein said substrate has an outer perimeter; and

wherein said first and second electrode layers each comprise respective substantially continuous portions and a plurality of tab portions extending from said respective continuous portions to said outer perimeter of said substrate.

15. A multi-layer capacitor as in claim 14, further comprising:

a second insulating layer generally covering said second electrode layer, said second insulating layer defining a third plurality of through-holes there through, said third plurality of through-holes being respectively offset laterally from said respective plural through-hole pairs; and

a second plurality of electrically conductive vias passing through selected of said third plurality of through-holes, each of said second plurality of electrically conductive vias respectively being connected to said second electrode layer.

16. A multi-layer capacitor as in claim 15, further comprising:

a plurality of solder balls, wherein each solder ball is respectively applied to a portion of selected ones of said first and second pluralities of electrically conductive vias.

17. A multi-layer capacitor as in claim 14, further comprising:

a resistive layer generally covering said first insulating layer, said resistive layer defining a third plurality of through-holes there through, said third plurality of through-holes being respectively concentrically juxtaposed with said respective plural through-hole pairs, said third plurality of through-holes each respectively having a third diameter thereof greater than or equal to said first diameter and less than or equal to said second diameter.

18. A multi-layer capacitor as in claim 14, wherein each of said first plurality of electrically conductive vias is characterized by respective first and second ends, and wherein a selected end of each of said first plurality of electrically conductive vias abuts said first electrode layer.

19. A cascade capacitor, comprising:

a first multi-layer capacitor comprising:

a substrate having an outer perimeter;

first and second electrode layers stacked on said substrate and separated from each other by an insulating layer, said first and second electrode layers each having a respective plurality of edges, said insulating layer and said second electrode layer each defining a respective plurality of through-holes there through;

a plurality of conductive vias passing through selected of said respective pluralities of through-holes and connected to said first electrode layer; and

a first and second plurality of tabs extending respectively from selected edges of said first and second electrode layers to said outer perimeter of said substrate, said first and said second plurality of tabs arranged in alternate interdigitated fashion to facilitate coupling of alternate electrode layers to external components;

a second multi-layer capacitor comprising:

first and second pluralities of electrode layers, each layer of said first and second pluralities of electrode layers separated from each other by an insulating layer, each electrode layer having a respective plurality of edges; and

first and second pluralities of tabs extending from selected edges of selected electrode layers of said respective first and second pluralities of electrode layers to the outer perimeter of said substrate of said first multi-layer capacitor, said first and said second pluralities of tabs arranged in alternate interdigitated fashion to facilitate coupling of alternate electrodes of said first and second pluralities of electrode layers to external components; and

a plurality of electrically conductive lands coupling selected of said first and second plurality of tabs of said first multi-layer capacitor to selected of said first and second pluralities of tabs of said second multi-layer capacitor.

20. A cascade capacitor as in claim 19, further comprising:

at least one surface mount capacitor coupled to

selected of said plurality of electrically conductive lands.

21. A cascade capacitor as in claim 20, wherein a pair of surface mount capacitors is coupled to selected of said plurality of electrically conductive lands.

22. A cascade capacitor as in claim 19, further comprising:

a single layer capacitor coupled to selected of said plurality of electrically conductive lands.

23. A cascade capacitor as in claim 19, further comprising:

at least one surface mount capacitor coupled to selected of said plurality of electrically conductive lands.

24. A cascade capacitor as in claim 23, wherein a pair of surface mount capacitors is coupled to selected of said plurality of electrically conductive lands.

25. A cascade capacitor as in claim 19, further comprising:

a plurality of said first multi-layer capacitors;

a plurality of said second multi-layer capacitors, each multi-layer capacitor of said plurality of first multi-layer capacitors respectively coupled individually in cascade with one of said multi-layer capacitors of said plurality of second multi-layer capacitors to form a plurality of cascade capacitor sections; and

a common capacitor coupled with each of said respective cascade capacitor sections.

26. A cascade capacitor as in claim 25, wherein said plurality of cascade capacitor sections are physically mounted in parallel on said common capacitor.

27. A cascade capacitor as in claim 25, wherein said common capacitor is a double layer capacitor.

28. A cascade capacitor as in claim 25, wherein said common capacitor is single electrochemical capacitor.

29. A cascade capacitor as in claim 19, wherein each of said plurality of conductive vias is respectively connected to the first electrode layer of said first multi-layer capacitor and passes through selected of said respective pluralities of through-holes in a non-contacting relationship with the second electrode layer of said first multi-layer capacitor.

30. A cascade capacitor as in claim 21, wherein:

said plurality of through-holes defined by said insulating layer of said first multi-layer capacitor are formed having a first diameter thereof; and

said plurality of through-holes defined by said second electrode layer of said first multi-layer capacitor are formed having a second diameter thereof greater than or equal to said first diameter and wherein said first and second pluralities of through-holes are further characterized as being respectively concentrically juxtaposed and forming respective plural through-hole pairs.

31. A cascade capacitor as in claim 19, further comprising:

at least one additional capacitor coupled to selected of said plurality of electrically conductive lands, wherein said at least one additional capacitor is selected from the group consisting of a surface mount capacitor, a single layer capacitor, a double layer capacitor, an electro-chemical capacitor, a ceramic capacitor, and a tantalum capacitor.

32. A cascade capacitor as in claim 19, wherein the thickness of distinct insulating layers of said insulating layers of said second multi-layer capacitor is varied among layers to adjust the resonance characteristics of said cascade capacitor.

33. A cascade capacitor as in claim 32, wherein selected distinct insulating layers in said second multi-layer capacitor are varied with continuous thickness variation among layers.

34. A cascade capacitor as in claim 32, wherein selected distinct insulating layers in said second multi-layer capacitor are varied with patterned thickness variation among layers.

35. A cascade capacitor as in claim 32, wherein selected distinct insulating layers in said second multi-layer capacitor are varied with variable thickness variation among layers.

36. A multi-layer capacitor, comprising:

a plurality of electrode layers and insulating layers stacked successively, said electrode layers each having a respective plurality of edges;

a plurality of tabs extending from selected edges of respective of said plurality of electrode layers and exposed on selected sides of said multi-layer capacitor, said respective pluralities of tabs arranged in alternate interdigitated fashion;

first and second pluralities of through-holes respectively formed by and perforating said top-most electrode layer and said adjacent underlying insulating layer and exposing said next successive electrode layer;

a first plurality of conductive vias, each passing

through selected of said first and second pluralities of through-holes and connected to the exposed electrode layer; and

a plurality of electrically conductive lands coupling selected of said plurality of tabs.

37. A multi-layer capacitor as in claim 36, further comprising:

at least one additional capacitor coupled to selected of said plurality of electrically conductive lands, wherein said at least one additional capacitor is selected from the group consisting of a surface mount capacitor, a single layer capacitor, a double layer capacitor, an electro-chemical capacitor, a ceramic capacitor, and a tantalum capacitor.

38. A multi-layer capacitor as in claim 37, wherein a pair of additional capacitors is coupled to selected of said plurality of electrically conductive lands.

39. A multi-layer capacitor as in claim 36, further comprising:

a single layer capacitor coupled to selected of said plurality of electrically conductive lands.

40. A multi-layer capacitor as in claim 39, further comprising:

at least one surface mount capacitor coupled to selected of said plurality of electrically conductive lands.

41. A multi-layer capacitor as in claim 40, wherein a pair of surface mount capacitors is coupled to selected of said plurality of electrically conductive lands.

42. A multi-layer capacitor as in claim 36, further comprising:

at least one additional multi-layer capacitor, each said multi-layer capacitor forming a cascade capacitor section; and

a common capacitor coupled with each of the cascade capacitor sections.

43. A multi-layer capacitor as in claim 42, wherein the cascade capacitor sections are physically mounted in parallel on said common capacitor.

44. A multi-layer capacitor as in claim 42, wherein said common capacitor is a double layer capacitor.

45. A multi-layer capacitor as in claim 42, wherein said common capacitor is a single electrochemical capacitor.

46. A multi-layer capacitor as in claim 36, wherein:

each of said first plurality of through-holes formed by and perforating said top-most electrode layer respectively has a first diameter thereof; and

each of said second plurality of through-holes formed by and perforating said adjacent underlying insulating layer respectively has a second diameter thereof greater than or equal to said first diameter.

47. A multi-layer capacitor as in claim 36, further comprising:

a resistive layer between said top-most electrode layer and said adjacent underlying insulating layer.

48. A multi-layer capacitor as in claim 36, wherein the thickness of selected of said insulating layers is varied among layers to adjust the resonance characteristics of said multi-layer capacitor.

49. A multi-layer capacitor as in claim 48, wherein selected of said insulating layers are varied with continuous thickness variation among layers.

50. A multi-layer capacitor as in claim 48, wherein selected of said insulating layers are varied with patterned thickness variation among layers.

51. A multi-layer capacitor as in claim 48, wherein selected of said insulating layers are varied with variable thickness variation among layers.